

April 24,2003

INFORMATIONAL MEMORANDUM

TO: Ross J. Davidson, Jr., Administrator

FROM: Ron Berryhill /s/ *Ron Berryhill*
Director

SUBJECT: 2003 Irrigation Assessment; Oklahoma City Regional Office

As required in FCIC-25010 at section 6, Paragraph 40 part E., our assessment of areas within the region where there is a suspected or known lack of irrigation water for the 2003 crop year is as follows. Information being provided reflects conditions as of early April and conditions may improve before the actual planting dates in West Texas.

Lower Rio Grande Valley: (Cameron, Hidalgo, Willacy, and Starr Counties, Texas)

The Southern Region of Texas including the Lower Valley is experiencing “slightly wet” to “extremely wet” conditions. The crop moisture index (CMI) for the month of February indicated the entire state is under “moisture adequate” conditions. The climate prediction center predicts “above normal” precipitation for all of Texas from March to May 2003 and “normal” precipitation from April to June. During the same time period, temperatures should be below normal for the entire state.

The combined water available in Amistad and Falcon reservoirs as of April 1, 2003 for both agricultural and municipal use is at 58.8% of capacity or 826,688 acre feet, 277,433 acre feet more water than was available this time last year. Last year at this time the combined level was at about 43% of capacity or 615,052 acre feet. The average combined water use for municipal and agricultural use over the three year period from 1998 through 2000 has been about 800,000 acre feet.

Approximately 700,000 acres are under irrigation in the Lower Valley. Most of the area receives about 10 inches of rainfall during the February through July growing season for annually planted crops. Precipitation from storms and tropical depressions during the months of September and October average 7.5 inches. The District’s heaviest water use for irrigation occurs from May through July. The number of irrigations usually applied during the growing season in a normal year by crop are; sugarcane (6-8 waterings) followed by citrus and vegetables (4-6 waterings) followed by corn, cotton, and grain sorghum (2-4 waterings).

Although most of the water availability indicators above generally suggest adequate water for the remainder of this growing season, as in years past, there could be isolated cases and unique situations applicable to specific water districts and individual water users within those districts, that may cause water shortages to occur. Although we do not

currently expect wholesale water shortages to any large degree, the Lower Valley should remain on our suspect list for the remainder of the 2003 crop year until water stored in the reservoirs return to normal storage levels.

Conchas Reservoir: (Quay County New Mexico) – The Conchas Reservoir in southern San Miguel County New Mexico provides water for irrigation to about 41,000 acres in adjoining northern Quay County under the authority of the Arch Hurley Conservancy District.

The principal source of water for the Conchas Reservoir is surface runoff and to a lesser degree snow pack. In a normal year 50,000 acre feet of water would recharge the reservoir. The reservoir has received essentially no recharge in over a year. Watershed run-off has been negligible over the past four years.

Water enters the Conchas canal from the reservoir via gravity flow. As of April 1, 2003, the level of the lake is 40 ft. below the spillway or 4,162 ft. elevation (85,000 ac/ft. of water). At about 4,163 ft. elevation, gravity flow of water from the lake to the canal becomes impractical because there is not enough head pressure in the lake to push water the required 40 mile run down the canal to reach the first delivery point. And, pumping water from the reservoir to the canal at this level is not economically feasible. In addition, up to one-half the water released will be lost in the delivery process before it ever reaches the delivery point of use. All of these factors are considered in determining available water for irrigation.

During the month of February and March the Conservancy determines the amount of water that would normally be available for the first release. Last year, the Conservancy allowed an initial allotment of 3” and then shut the water off in June. This year, based on the acre-feet of water currently available and the problems identified above, no allocations are being allowed. If and when additional water becomes available, the potential for any additional allocations will be evaluated and established on a monthly basis.

Red Bluff Reservoir: (Reeves, Pecos, and Ward Counties, Texas) – The Red Bluff Reservoir is on the Pecos River and services about 10,000 – 30,000 acres of crop land through 7 different water districts in Reeves, Pecos and Ward Counties in west Texas. All cropland is irrigated. The average annual rainfall of 10 – 12 inches will not sustain dry-land crops.

The source of water for the reservoir comes from releases of water from impoundments along the Pecos River in New Mexico and from rainfall that normally occurs within the reservoir’s watershed. Water releases from New Mexico normally occur in October or November for use during the next crop year’s growing season. The combined inflows from both sources normally average around 100,000 acre-feet.

The reservoir will hold about 290,000 acre-feet at full capacity. Normal allocations for irrigation could be expected with storage levels around 100,000 acre-feet. Water from the reservoir is only used for agricultural purposes but the water manager must keep in reserve the last 40,000 acre-feet of water for conservation and dam maintenance purposes.

This time last year the reservoir contained about 41,000 acre-feet. No allocations for irrigation were allowed last year. This year the reservoir has about 60,000 acre-feet currently in storage. Almost half of any water released will be lost in the delivery process and is considered in determining the amount of water to be released for an initial allocation.

The District Board of Directors and the water manager met the second Tuesday in April to evaluate any additional inflows that might have occurred up to that time and to assess the potential for irrigation allocations this planting season. No allocations are currently being assessed as a result of that meeting. If conditions improve during the remainder of this month into May, any potential allocations will be evaluated at that time.

Surface water via reservoirs and lakes has been the principal water source for irrigation throughout this area because of the high salt content/toxicity of ground water. Well water being used for irrigation in this area should be tested for its salinity content and deemed acceptable for crop use in accordance with Extension Service recommendations before applying it to any cropland.

Elephant Butte Reservoir: (New Mexico - Donna Anna County; Texas - El Paso and Hudspeth Counties) - Elephant Butte Reservoir provides water for irrigation districts in Donna Anna County New Mexico and the adjoining counties of El Paso and Hudspeth in Texas.

The principle source of water comes from winter snow-pack in the southern Rocky Mountains. Winter snow-pack normally occurs from November – January. Recharge from run-off occurs from March – April. This area has not received a normal snow-pack in the past 5 years. A normal run-off would contribute about 573,000 acre-feet of water annually and it is usually the first of June before any of that runoff actually reaches the Reservoir.

Water is released from Elephant Butte Reservoir into the Rio Grande River based on the accumulated demands from the water districts for both municipal and agricultural use. Principle crops grown in this area are pecans, chilies, vegetables, alfalfa, cotton, corn, and grain sorghum. Pre-watering of acreage intended for planting annuals usually begins in February. Many, but not all, growers in these three irrigation districts have the capability of supplementing surface irrigation with groundwater pumped from individually owned wells

Donna Anna County New Mexico:

This district covers about 90,000 acres of cropland. The initial allocation for this district is currently 3 inches per-acre. A typical season's allotment is about 2 – 2 ½ acre-feet. This year, irrigation orders must be placed in advance and initial water orders can be placed from February 24 to April 11

This initial allotment is based on the Districts current allocation for diversion of water from the Rio Grande as determined by the U.S. Bureau of Reclamation, which is 50,000 acre feet. The District's Board of Directors has decided to divert the 50,000 acre feet in blocks of time during which surface water will be delivered to farms. The 1st block will begin March 17 and end on about April 11. Orders for water forming this block can be placed with the district from March 3 through April 1.

If water is available for a 2nd block release, that release will be for June 1 through July 1. Orders for the second block will be accepted from May 19 – June 23. Small tract irrigators of less than two acres are currently allocated one-irrigation. Access to this irrigation will occur from March 17 – April 11. Additional allocations will be made if and when additional water is available.

The district has faced severe drought in the past and survived by relying on groundwater to supplement the reduced surface water supply. Farmers who had wells pumped to other farms or transferred their surface water to farmers who didn't have wells. As a result, there really wasn't much of a reduction in production even with very short surface water supplies. Under current expectations, a second allotment could be scheduled to give irrigators about half an acre-foot for the season.

El Paso County Texas:

The El Paso County Water district provides irrigation water to approximately 50,000 acres in El Paso County. The water district's normal water allotment is around 376,000 acre-feet. Their current allotment is about 55,000 acre-feet with an initial allocation of 8 inches per-acre. Last year their allocation was 48 inches per-acre.

Any additional allocation received this year will depend upon actual inflows to Elephant Butte from this spring's snow-melt or intermittent spring/summer storms. However, the water district is forecasting water users will eventually have available about 40%-50% of their normal allocation at or shortly before planting time.

Hudspeth County Texas:

The Hudspeth County Conservation and Reclamation District (HCCRD) provides irrigation for agricultural producers for about an 18,000-acre area along the Rio Grande that stretches from El Paso to Fort Quitman. The most reliable source of the water used

for irrigating crops in this district comes from individually owned wells. Water diversions from the river are downstream from El Paso and dependent upon water the El Paso district does not use, irrigation tail-water from that district, or releases from water treatment plants. For all practical purposes, Hudspeth County's only reliable source of water at the current time is from individually owned wells. Due to the high salinity content of groundwater in this area the water should be tested and deemed appropriate for crop use before applying it to insured crops.